

MAR - 4 2004

Summary of Safety and Effectiveness  
Lyphocheck Assayed Chemistry Control

K040273

1.0 **Submitter**

Bio-Rad Laboratories  
9500 Jeronimo Road,  
Irvine, California 92618-2017  
Telephone: (949) 598-1200  
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**Contact Person**

Maria Zeballos  
Regulatory Affairs Specialist  
Telephone: (949) 598-1367

**Date of Summary Preparation**

January 23, 2004

2.0 **Device Identification**

Product Trade Name:	Lyphocheck Assayed Chemistry Control
Common Name:	Quality Control Materials, all kinds (Assayed and Unassayed)
Classifications:	Class I
Product Code:	JJY
Regulation Number:	CFR 862.1660

3.0 **Device to Which Substantial Equivalence is Claimed**

Lyphocheck Assayed Chemistry Control  
Bio-Rad Laboratories  
Irvine, California

Docket Number: K874280

4.0 **Description of Device**

Lyphocheck Assayed Chemistry Control is prepared from human serum with added constituents of purified biochemicals (tissue extracts of human and animal origin), chemicals, therapeutic drugs, preservatives and stabilizers. The control is provided in lyophilized form.

5.0 **Statement of Intended Use**

Lyphocheck Assayed Chemistry Control is intended for use as an assayed quality control serum to monitor the precision of laboratory testing procedures for the analytes listed in the package insert.

6.0 **Comparison of the new device with the Predicate Device**

Lyphocheck Assayed Chemistry Control claims substantial equivalence to the Lyphocheck Assayed Chemistry Control currently in commercial distribution (K874280).

**Table 1. Similarities and Differences between new and predicate device.**

Bio-Rad		Bio-Rad																																																																										
Characteristics	Lyphocheck Assayed Chemistry Control (New Device)	Lyphocheck Assayed Chemistry Control (Predicate Device K874280)																																																																										
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Form	Lyophilized	Lyophilized																																																																										
Matrix	Serum	Serum																																																																										
Storage (Unopened)	2-8°C until expiration date	2-8°C until expiration date																																																																										
After Reconstitution and Freezing	All analytes will be stable for 30 days when stored tightly capped at -10 to -20°C with the following exceptions: Tobramycin will be stable for 20 days	All analytes will be stable for 30 days when stored tightly capped at -10 to -20°C with the following exceptions: Tobramycin will be stable for 20 days																																																																										
Differences																																																																												
Open Vial	7 days at 2 to 8°C with the following exceptions: Acid Phosphatase and Prostatic Acid Phosphatase will be stable for 3 days.	7 days at 2 to 8°C with the following exceptions: Acid Phosphatase, Prostatic Acid Phosphatase and Alkaline Phosphatase will be stable for 3 days.																																																																										
Analytes	Same as the predicate device with the following exceptions: Does not contain claims for: <ul style="list-style-type: none"><li>• Aldolase and Folate</li></ul> Contains claims for the following additional analytes: <ul style="list-style-type: none"><li>• Calcium (ionized)</li><li>• Copper</li><li>• Glutamate Dehydrogenase (GLDH)</li><li>• Globulin</li><li>• Cholesterol (LDL)</li><li>• Iron-Binding Capacity, Total (TIBC)</li><li>• Iron Binding Capacity, Unsaturated (UIBC)</li><li>• T3 Free</li><li>• T4 Free</li><li>• Transferrin</li><li>• Vitamin B12</li><li>• Zinc</li></ul>	<table><tr><td>Acetaminophen</td><td>Glucose</td></tr><tr><td>Acid Phosphatase, Total</td><td>Haptoglobin</td></tr><tr><td>Alanine Aminotransferase (ALT)</td><td>Immunoglobulin A (IgA)</td></tr><tr><td>Albumin</td><td>Immunoglobulin G (IgG)</td></tr><tr><td>Aldolase</td><td>Immunoglobulin M (IgM)</td></tr><tr><td>Alkaline Phosphatase (ALP)</td><td>Iron</td></tr><tr><td>αHBDH</td><td>Lactate (Lactic Acid)</td></tr><tr><td>Alpha-1-Antitrypsin</td><td>Lactate Dehydrogenase (LDH)</td></tr><tr><td>Alpha-Fetoprotein (AFP)</td><td>LAP – Arylamidase</td></tr><tr><td>Amylase</td><td>Lipase</td></tr><tr><td>Amylase, Alpha</td><td>Lithium</td></tr><tr><td>Amylase, Pancreatic</td><td>Magnesium</td></tr><tr><td>Apolipoprotein A-1</td><td>Osmolality</td></tr><tr><td>Apolipoprotein B</td><td>Phenobarbital</td></tr><tr><td>Aspartate Aminotransferase (AST/SGOT)</td><td>Phenytoin</td></tr><tr><td>Bilirubin, Direct</td><td>Phosphorus</td></tr><tr><td>Bilirubin, Indirect</td><td>Potassium</td></tr><tr><td>Bilirubin, Total</td><td>Prostate Specific Antigen (PSA)</td></tr><tr><td>C3 Complement</td><td>Prostatic Acid Phosphatase (PAP)</td></tr><tr><td>C4 Complement</td><td>Protein Electrophoresis</td></tr><tr><td>Calcium</td><td>Protein, Total</td></tr><tr><td>Carbamazepine</td><td>Salicylate</td></tr><tr><td>Carbon Dioxide (CO2)</td><td>Sodium</td></tr><tr><td>Carcinoembryonic Antigen (CEA)</td><td>T3 Total</td></tr><tr><td>Ceruloplasmin</td><td>T3 Uptake</td></tr><tr><td>Chloride</td><td>T4 Total</td></tr><tr><td>Cholesterol, High Density Lipoprotein (HDL)</td><td>Theophylline</td></tr><tr><td>Cholesterol, Total</td><td>Thyroid Stimulating Hormone (TSH)</td></tr><tr><td>Cholinesterase</td><td>Thyroxine Binding Globulin (TBG)</td></tr><tr><td>Cortisol</td><td>Tobramycin</td></tr><tr><td>Creatine Kinase (CK)</td><td>Transferrin</td></tr><tr><td>Creatinine</td><td>Triglycerides</td></tr><tr><td>Digoxin</td><td>Urea</td></tr><tr><td>Folate</td><td>Urea Nitrogen</td></tr><tr><td>Gamma Glutamyltransferase (GGT)</td><td>Uric Acid</td></tr><tr><td>Gentamicin</td><td>Valproic Acid</td></tr><tr><td>Globulin</td><td>Vancomycin</td></tr></table>	Acetaminophen	Glucose	Acid Phosphatase, Total	Haptoglobin	Alanine Aminotransferase (ALT)	Immunoglobulin A (IgA)	Albumin	Immunoglobulin G (IgG)	Aldolase	Immunoglobulin M (IgM)	Alkaline Phosphatase (ALP)	Iron	αHBDH	Lactate (Lactic Acid)	Alpha-1-Antitrypsin	Lactate Dehydrogenase (LDH)	Alpha-Fetoprotein (AFP)	LAP – Arylamidase	Amylase	Lipase	Amylase, Alpha	Lithium	Amylase, Pancreatic	Magnesium	Apolipoprotein A-1	Osmolality	Apolipoprotein B	Phenobarbital	Aspartate Aminotransferase (AST/SGOT)	Phenytoin	Bilirubin, Direct	Phosphorus	Bilirubin, Indirect	Potassium	Bilirubin, Total	Prostate Specific Antigen (PSA)	C3 Complement	Prostatic Acid Phosphatase (PAP)	C4 Complement	Protein Electrophoresis	Calcium	Protein, Total	Carbamazepine	Salicylate	Carbon Dioxide (CO2)	Sodium	Carcinoembryonic Antigen (CEA)	T3 Total	Ceruloplasmin	T3 Uptake	Chloride	T4 Total	Cholesterol, High Density Lipoprotein (HDL)	Theophylline	Cholesterol, Total	Thyroid Stimulating Hormone (TSH)	Cholinesterase	Thyroxine Binding Globulin (TBG)	Cortisol	Tobramycin	Creatine Kinase (CK)	Transferrin	Creatinine	Triglycerides	Digoxin	Urea	Folate	Urea Nitrogen	Gamma Glutamyltransferase (GGT)	Uric Acid	Gentamicin	Valproic Acid	Globulin	Vancomycin
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## 7.0 **Statement of Supporting Data**

Stability studies have been performed to determine the open vial stability and shelf life for the Lyphocheck Assayed Chemistry Control. Product claims are as follows:

- 7.1 Open vial: All analytes will be stable for 7 days at 2 to 8°C with the following exceptions:  
Acid Phosphatase and Prostatic Acid Phosphatase will be stable for 3 days.

- 7.2 After reconstitution and freezing: All analytes will be stable for 30 days when stored at –10 to –20°C with the exception of Tobramycin which will be stable for 20 days.
- 7.3 Shelf Life: 3 Years + 4 Months at 2 to 8°C
- 7.4 Real time studies will be ongoing to support the shelf life of this product.

All supporting data is retained on file at Bio-Rad Laboratories.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration  
2098 Gaither Road  
Rockville MD 20850

MAR - 4 2004

Ms. Elizabeth Platt  
Regulatory Affairs Manager/Quality Assurance  
Bio-Rad Laboratories, QSD  
9500 Jeronimo Road  
Irvine, CA 92618-2017

Re: k040273  
Trade/Device Name: Lypochek Assayed Chemistry Control  
Regulation Number: 21 CFR 862.1660  
Regulation Name: Quality control material (assayed and unassayed)  
Regulatory Class: Class I  
Product Code: JJY  
Dated: January 23, 2004  
Received: February 5, 2004

Dear Ms. Platt:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in Title 21, Code of Federal Regulations (CFR), Parts 800 to 895. In addition, FDA may publish further announcements concerning your device in the Federal Register.

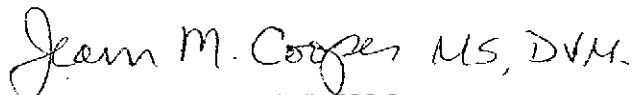
Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Parts 801 and 809); and good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820).

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This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific information about the application of labeling requirements to your device, or questions on the promotion and advertising of your device, please contact the Office of *In Vitro* Diagnostic Device Evaluation and Safety at (301) 594-3084. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address <http://www.fda.gov/cdrh/dsma/dsmamain.html>.

Sincerely yours,



Jean M. Cooper, MS, D.V.M.

Director

Division of Chemistry and Toxicology

Office of *In Vitro* Diagnostic Device

Evaluation and Safety

Center for Devices and

Radiological Health

Enclosure

510 (k) Number (if known): K040273

Device Name: **Lyphochek Assayed Chemistry Control**

Indications for Use:

**For use as an assayed quality control serum to monitor the precision of laboratory testing procedures for the analytes listed in the package insert.**

(PLEASE DO NOT WRITE BELOW THE LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

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*Concurrence of CDRH, Office of Device Evaluation (ODE)*

Prescription use X or Over-the Counter use \_\_\_\_\_

Carol C Benson  
Division Sign-Off

Office of In Vitro Diagnostic  
Device Evaluation and Safety

510(k) K040273